

EXHIBIT A

EMPLOYMENT AGREEMENT

AGREEMENT, dated January 1, 2015 (the "Effective Date"), by and between RENAISSANCE TECHNOLOGIES LLC (the "Company"), a Delaware limited liability company, and DAVID MITCHELL MAGERMAN (the "Employee").

WHEREAS, the Employee is an "at will" employee and a Principal of the Company;

WHEREAS, as a Principal, the Employee has access to highly sensitive proprietary strategic information of the Company;

WHEREAS, the Employee and the Company are parties to an employment agreement dated June 11, 2010 (together with any subsequent amendments, the "Prior Agreement");

WHEREAS, the Company and the Employee desire to enter into a new agreement as of the Effective Date that will supersede and replace the Prior Agreement other than as set forth herein; and

WHEREAS, the Company desires to employ the Employee on the terms and conditions set forth herein, and the Employee wishes to be so employed.

NOW, THEREFORE, in consideration of the mutual promises and agreements contained herein, the sufficiency of which is hereby acknowledged, the parties agree as follows:

1. **Employment.** Subject to the terms and conditions set forth herein, the Company hereby employs the Employee, and the Employee hereby accepts such employment.

2. **At Will.** The Employee's employment shall be "at will." This means that the Employee's employment and this Agreement may be terminated at any time by either party for any reason or no reason at all, with or without cause or notice.

3. **Employment Services.** The Employee shall render services to the Company as a full-time member of its Technical staff. The Employee shall, at all times, discharge the Employee's responsibilities in a diligent and faithful manner consistent with the Employee's duty of loyalty to the Company. The Employee shall devote all business time, effort, and skill to the Company.

4. **Compensation.**

a. The Company shall pay the Employee a salary (the "Base Salary") at the rate of \$251,212 per annum.

b. In addition to the Base Salary and subject to satisfactory performance of the Employee's duties hereunder, the Company shall pay the Employee a bonus (the "Bonus"), payable semiannually, based on the performance as of June 30th and December 31st of each year (each, a "Bonus Period") of the various funds for which the Company acts as investment adviser. The amount of the Bonus shall be determined by reference to the Company's Bonus Pool to which approximately 50% of the Company's Net Income From Operations (as defined below) is

allocated and in relation to which the Employee has been allocated 12,500 points. For these purposes, Net Income From Operations shall equal the sum of (i) management fees and performance allocations that are earned from the Medallion funds (calculated as if a 5% management fee and a 36% performance allocation were earned with respect to investments made in fee-free accounts), (ii) management fees and performance allocations that are received from other Renaissance-sponsored investment vehicles for the applicable Bonus Period, and (iii) income received by the Company under investment advisory and administrative agreements, net of the Company's customary expenses and reserves, all as calculated in a manner consistent with past practices. Notwithstanding anything to the contrary, all Bonus amounts will be prorated for any partial periods of employment.

c. The Base Salary and the Bonus will be reviewed by the Company from time to time and are subject to increase or decrease in the sole discretion of the Company.

d. The Base Salary and the Bonus are payable in accordance with the Company's regular payroll practices and are subject to withholdings as required by law.

5. **Employee Benefits.** The Employee shall be entitled to the following perquisites and employee benefits:

a. The Employee shall be entitled to paid vacation of 30 days per annum, subject to change in accordance with the Company's vacation policy as in effect from time to time.

b. The Employee shall be entitled to those employment benefits generally made available to employees of the Company and shall have the right to participate in the employee benefit plans maintained by the Company on behalf of employees generally (including any 401(k) plan, healthcare plans, group life and disability insurance) to the extent permitted by such plans subject to their terms and conditions. Nothing herein shall be deemed to obligate the Company to adopt any employee benefit plan or prevent it from modifying or terminating any plan previously maintained by it.

6. **No Conflict.** The Employee represents and warrants to the Company that the Employee is free to enter into this Agreement and has no contractual commitments, restrictions, or obligations that will in any way preclude or interfere with the Employee's employment by the Company, conduct of Company business, or ability to enter into this Agreement and perform hereunder.

7. **Intellectual Property.** "Intellectual Property" means all works, including scientific or mathematical papers or publications or any work that may be the subject matter of copyright or patent protection; trade secrets; advertising or marketing concepts; information; documents; data; formulae; algorithms; designs; models; drawings; computer programs, processing systems and techniques; source codes; including all discoveries, developments, improvements, modifications, and inventions and all statutory protection obtained or obtainable thereon. The Employee hereby assigns all worldwide right, title, and interest to the Company in and to Intellectual Property created, made, conceived, expressed, developed, actually or constructively reduced to practice, or authored (collectively, "Created") by the Employee solely or jointly with others or with the use of information, materials, or facilities of or provided by the Company and received by the Employee during the Employee's employment by the Company.

In addition, any Intellectual Property that qualifies as a *work made for hire* under the U.S. Copyright laws shall be a *work made for hire* and shall be owned by the Company. The Employee waives any "moral rights" (as the term is commonly understood) the Employee may now or hereafter have in or to any such Intellectual Property throughout the universe.

8. **Confidential Information.** "Confidential Information" means all Intellectual Property Created by the Employee and all other Intellectual Property and other information relating to the business and affairs of the Company and its affiliates directly or indirectly disclosed by or on behalf of the Company to the Employee whether in writing or orally, including without limitation research, business strategies, trading positions, and execution procedures, models, algorithms, mathematically based information, investor lists, contracts, costs, profits, markets, sales, existing and potential customers, suppliers and employees, plans for future development, promotional methods, financial data, personnel information, and any other information of a similar nature not available to the public.

9. **Use Of Confidential Information.** The Employee acknowledges and agrees that Confidential Information is critical to the Company and belongs to it. The Employee shall use Confidential Information exclusively for the purposes of satisfying the Employee's duties and obligations to the Company.

10. **Nondisclosure Of Confidential Information And Return Of Company Property.**

a. The Employee shall safeguard the secrecy and confidentiality of Confidential Information, which the Employee acknowledges constitutes "trade secrets" of the Company. The Employee shall not disclose any Confidential Information to any third party during the Employee's employment by the Company or thereafter except for the following:

- (i) information that at the time of disclosure is part of the public knowledge or literature and is readily accessible to such third party, provided that any combination of features shall not be deemed within this exception merely because individual features are part of the public knowledge or literature and readily accessible to such third party but only if the combination itself and its principles of operation are part of the public knowledge or literature and are readily accessible to such third party;
- (ii) information required by law to be disclosed; or
- (iii) information disclosed with the express prior written consent of the Company.

b. Upon termination of the Employee's employment for any reason or upon request of the Company at any time, the Employee shall immediately return to the Company (i) all Confidential Information and all copies thereof (whether in electronic or paper form), including without limitation all documents, notes, records, files, abstracts, or derivative works (as well as any passwords applicable thereto), and (ii) all other property of the Company, including without limitation passes, keys, credit cards, computer access codes, software, hardware, telephones, computers, and equipment. The Employee will not access, view, alter, or use the Company's

computer system or any information contained therein, or attempt to do so, subsequent to the Employee's last day of employment.

11. Noncompetition.

a. The Employee acknowledges the duty to advance the interests of the Company faithfully and to refrain from taking any action inconsistent with the Company's interests. The Employee further acknowledges the nature of the Company's business and the efforts the Company undertakes to develop, preserve, and protect its competitive advantage. Without the prior written consent of the Company, which consent shall not be unreasonably withheld, the Employee shall not, during the Employee's employment by the Company and for a one-year period thereafter, directly or indirectly own, manage, operate, participate in, be employed by, or be otherwise interested in, any activity, transaction, person, entity, or other enterprise that directly competes with the Company or any of its direct or indirect affiliates with respect to the Company's primary business activity, the mathematically based trading of futures and securities.

b. The Employee acknowledges that the Company takes significant steps to develop, preserve, and protect the relationships it has with its employees, representatives, agents, and independent contractors and that these relationships are critical to its business. The Employee shall not, during the Employee's employment by the Company and for a one-year period thereafter, (i) induce, influence, or seek to induce or influence any person who has been engaged as an employee, representative, agent, independent contractor, or otherwise by the Company or any of its direct or indirect affiliates to terminate his or her relationship with the Company or any of its affiliates or (ii) hire or enter into a joint venture or partnership with any person who has been engaged as an employee, representative, agent, independent contractor, or otherwise by the Company or any of its direct or indirect affiliates, provided that Section 11(b)(ii) hereof shall not apply to representatives, agents, or independent contractors the activities of which already include the same tasks for competitors of the Company or any of its direct or indirect affiliates.

c. In the event that the Company terminates the employment of the Employee without "Just Cause" (as defined below), the Company shall pay the Employee's Base Salary for one year from the date of such termination.

d. For purposes of Section 11(c) hereof, "Just Cause" means the Company's good faith determination that termination of the Employee's employment is necessary by reason of (i) the commission by the Employee of any act that, if successfully prosecuted by the appropriate authorities, would constitute a felony under state or federal law; (ii) fraud, dishonesty, or any conduct that has, or may be reasonably expected to have, a material negative effect on the business or reputation of the Company; or (iii) the material breach by the Employee of the provisions of this Agreement (or any rules, policies, procedures, or guidelines of the Company), including without limitation the confidentiality and noncompetition provisions set forth herein.

12. Nondisparagement. The Employee agrees not to make any disparaging or negative statement about the Company; any of its affiliates; any of their officers, directors, shareholders, members, managers, employees, representatives, and agents; or any of their businesses and activities, provided that nothing herein shall preclude the Employee from testifying as required by lawful subpoena or other legal process, making good faith reports to

governing regulatory bodies or authorities, or communicating inside the Company consistent with legitimate business needs.

13. Cooperation. The Employee agrees to cooperate with and assist the Company as to matters that occurred during the Employee's employment, including with respect to any action, claim, arbitration, or proceeding. The Company shall reimburse the Employee for reasonable out-of-pocket expenses incurred in connection with such cooperation.

14. Reasonableness. The Employee agrees and acknowledges that the restrictions and limitations in this Agreement, including without limitation Sections 9 through 11 hereof, are reasonable and necessary to protect the legitimate business interests of the Company. The Employee acknowledges that all restrictions and limitations relating to the period following the end of his or her employment will apply regardless of the reason that the employment ends. The Employee also acknowledges that the Company would not have entered into this Agreement unless the Employee had agreed to such restrictions and limitations. If a court of competent jurisdiction determines that any provision of this Agreement is invalid or unenforceable, the court shall have the authority to modify and/or "blue pencil" this Agreement to render it enforceable and to effect the intent of the parties to the fullest extent permitted by law.

15. Enforcement of Rights; Injunctive Relief. The parties acknowledge and agree that in the event of an actual or threatened breach by the Employee of Sections 9 through 11 hereof, the Company will suffer substantial irreparable harm for which there is no adequate remedy at law. In recognition of the foregoing, the parties agree that, in addition to such other remedies as the Company may have at law, without posting any bond or security or requirement for proof of actual damages, the Company shall be entitled to equitable relief from a court or arbitral tribunal of competent jurisdiction in the form of specific performance; temporary, preliminary, or permanent injunctive relief; or any other equitable remedy that may be available. Such equitable relief shall not affect the Company's right to obtain damages or other relief from a court of competent jurisdiction on account of any actual or threatened breach by the Employee of Sections 9 through 11 hereof.

16. Notices. Any notice, request, instruction, or other document to be given under this Agreement to any party hereunder by the other party shall be in writing and delivered personally, with receipt thereof acknowledged, or sent by registered or certified mail, postage prepaid, to the following addresses:

If to the Company:

Renaissance Technologies LLC
800 Third Avenue
New York, New York 10022
Attention: Mark Silber

If to the Employee:

David Mitchell Magerman
117 Raynham Rd
Merion Station, PA 19066

or to such other address as a party hereto may hereafter designate in writing to the other party, provided that any notice of a change of address shall become effective only upon receipt thereof.

17. Benefit; Assignment.

a. This Agreement shall be binding upon and inure to the benefit of the Company and its permitted successors and assigns.

b. This Agreement shall be binding upon and inure to the benefit of the Employee and his or her personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees, and legatees. This Agreement is personal to the Employee, and the Employee may not assign any rights or obligations under this Agreement.

18. Entire Agreement; Amendment. This Agreement contains the entire understanding between the Company and the Employee with respect to the subject matter hereof and supersedes all prior agreements, negotiations, and understandings, whether oral or written, between the Company and the Employee with respect to the subject matter hereof except for any prior or contemporaneous confidentiality, trade secret, nondisclosure, noncompetition, and nonsolicitation covenants, which, together with such covenants in this Agreement, shall be enforced to the fullest extent permitted by law. In addition, any Intellectual Property waivers that were executed in connection with prior employment agreements between the Employee and the Company shall remain in full force and effect and shall apply equally to this Agreement. This Agreement may not be amended or modified except by a written instrument signed by both the Company and the Employee.

19. Severability. If any provision of this Agreement is held to be invalid or unenforceable, such illegality or unenforceability shall not affect the validity or enforceability of the other provisions hereof, and such other provisions shall remain in full force and effect, unaffected by such invalidity or unenforceability.

20. Governing Law. This Agreement shall be governed by the laws of the State of New York without reference to the conflict or choice of laws provisions thereof.

21. Arbitration. Except as provided in Section 15 hereof, the parties agree that any disputes arising out of or relating to (i) this Agreement or the breach hereof and/or (ii) the Employee's employment with the Company, including but not limited to tort claims, claims relating to intellectual property, and claims for discrimination, sexual harassment and retaliation, shall be settled by binding arbitration before one neutral arbitrator in accordance with the Employment Arbitration Rules and Procedures of JAMS. The arbitration shall take place in New York City. The award rendered by the arbitrator shall be binding upon the parties, and judgment on the award may be entered in any court of competent jurisdiction. Each party shall pay one-half of the costs, fees, and expenses of the arbitration, including the arbitrator's fees, and each party shall bear its own attorneys' fees and expenses.

The parties agree that in connection with any such arbitration there shall be no discovery of the contents of the Company's trading systems, including its source code, absent a showing that such information is absolutely necessary to determine the dispute, in which case the parties agree that (i) any such discovery will be limited strictly to information that is absolutely

necessary for determination of the dispute, and (ii) they will enter into a confidentiality agreement adequate to ensure that the information is not disclosed to a third party or used other than in the arbitration.

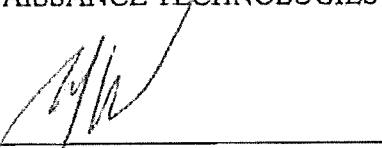
22. Captions; Construction. Captions contained in this Agreement are inserted only as a matter of convenience and shall in no way define, limit, or extend the scope or intent of this Agreement or any provision hereof or in any way affect the construction or interpretation thereof. The parties further acknowledge that this Agreement shall not be construed more strictly against either of them.

23. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

24. Survival. Sections 9 through 15 and 21 hereof shall survive the termination of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed on the date first written above.

RENAISSANCE TECHNOLOGIES LLC

By: 

Name: Mark Silber

Title: Executive Vice President


DAVID MITCHELL MAGERMAN